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REMARKS

Claims 1-14 were addressed in the subject office action.

The specification stands objected to, due to informalities. Claim 5 is objected to as lacking antecedent.

Claims 1, 3, 5-7, 10 and 14 stand rejected under 35 USC §102. Claims 8, 9, and 11 – 13 stand rejected under 35 USC §103. Claims 2 and 4 are deemed allowable but stand objected to as being dependent from rejected base claims.

Objections to Specification

The foregoing amendments address the stated objections to the specification.

Objection to Claim 5

Claim 5 has been amended to address the stated objection.

Rejection of Claims 1, 3, 5-7, 10 and 14 under 35 USC §102

The rejection of the above-identified claims has been rendered moot by the cancellation of claims 1 and 3 and the amendment of the other rejected claims to depend from claims 2 and 4, which were deemed to be allowable.

Claims 2 and 4 have been amended by incorporation therin of the substance of the base claims from which those claims depended. The limitations from base claims 1 and 3 that stated that the circuit substrates and cooling plates be non-electrically conductive does not appear to bear on the patentability of claims 2 and 4, and so were not included. These limitations are preserved, however, as new dependent claim 15.

Rejection of Claims 8, 9, and 11 – 13 under 35 USC §103

The above-identified claims stand rejected under 35 USC §103 as being obvious over U.S. Patent No. 5,016,138 to Woodman, in view of U.S. Patent No. 5,955,010 to Okada et al. Woodman was cited for showing an integrated circuit package comprising circuit-carrying substrates and intervening cooling plates, but Woodman fails to show an optical IC circuit in the package. Okada is cited for disclosing an optical IC with an optical signal line and the Examiner asserts that it would be obvious to use the chip

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shown by Okada in the package shown by Woodman, and that the resulting combination renders obvious the rejected claims.

The stated rejection is rendered moot relative to the pending claims because of the amendments to the base claims from which these claims depend. However, the subject matter of new claim 16 is similar to that of claim 8, so the stated ground of rejection of claim 8 is addressed herein, in support of claim 16 and the claims dependent therefrom, even though claim 16 does not include all the limitations of the base claims from which claim 8 depends.

New claim 16 is drawn to an integrated circuit package in which there is at least one optical circuit and at least one optical signal path through a cooling plate or a circuit, wherein the optical circuit is positioned to communicate through the optical signal path.

It is respectfully submitted that claim 16 and the claims dependent therefrom are patentable over Woodman and Okada at least because claim 16 recites an optical signal path that goes through a substrate or cooling plate, not simply along the surface of such structures. In contrast, Okada only discloses the use of optical transmission lines on the top surface of a substrate, on which the optical transmission line is formed in situ from a nozzle. Nowhere does Okada disclose how to modify such a system in a way that would enable optical communication through the substrate and/or through a cooling plate, as recited in claim 16. The system disclosed by Okada would require significant modification that is not enabled by Okada or Woodman to render it useful in suggesting that an optical signal pass through a substrate or cooling plate. Accordingly, the applied references fail to render claim 16 or claims 17 - 19, which depend therefrom, obvious. Only the applicant has disclosed an integrated circuit package that includes an optical IC that can communicate by issuing an optical signal through a cooling plate or circuit substrate. Accordingly, claims 16 - 19 are believed to be allowable.

New Claims 20 and 21.

New claims 20 and 21 are similar in scope to claims 2 and 4 in that they are drawn to a circuit package that includes cooling plates with fluid conduits and a manifold for fluid flow, and are believed to be allowable at least for that reason.

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Each of the stated objections and grounds of rejection have been addressed or traverse. Reexamination and reconsideration of the rejected claims is respectfully requested.

If there are any additional charges with respect to this Amendment or otherwise, please charge them to Deposit Account No. 06-1130

Respectfully submitted,



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